

揉碎玉米秸秆可压缩性研究

范林 王春光 王洪波 赵桂芝 索海霞

内蒙古农业大学

关键词: 生物质能 玉米秸秆 可压缩性 影响因素 试验

摘要: 揉碎玉米秸秆的可压缩性对压缩工艺的优化、压缩设备的研制、压缩后产品的特性等均有重要影响。通过对揉碎后玉米秸秆进行压缩试验,研究了在不同初始密度下以不同速度压缩时,不同含水率揉碎玉米秸秆不同个体形状的可压缩性,并分析了不同压缩条件下揉碎玉米秸秆体积模量与压缩量、压缩密度之间的关系,获得了体积模量与压缩密度关系的数学模型。研究表明:揉碎玉米秸秆的可压缩性受到喂入揉碎玉米秸秆含水率、初始密度和压缩速度的影响,且当压缩密度大于 $230\text{kg}/\text{m}^3$ 时,随压缩密度的增加,可压缩性明显降低。The compressibility of maize straw has great effect on the compressing processing, properties of products compressed, optimizing processing technology and designing compressing equipments of maize straw. The compressibility of maize straw rubbed was experimentally studied under certain initial density, different forms and different moisture contents with different compressing velocities. The relation curves of bulk modulus against compressing displacement and compressing density were analyzed by means of regressive analysis. Finally, the regressive mathematical model of compressibility was obtained. The results show that moisture content, initial densities and compressing velocities have obvious effects on compressibility of maize straw rubbed. Especially, when compressing density is larger than $230\text{kg}/\text{m}^3$, the compressibility of maize straw rubbed reduces significantly with increasing of compressing density.

[查看全文](#) (请使用Adobe Acrobat 6.0版本浏览) [返回首页](#)

[引用本文](#)